

Claims:

1. Apparatus for facilitating visualization of a patient's prostate/bladder junction, comprising:  
a catheter having proximal and distal ends, a proximal deployment port at the proximal end, a  
5 first outlet port at the distal end, and a first lumen extending therebetween;  
a plunger having proximal and distal ends, the distal end of the plunger configured to slidably pass through the proximal deployment port; and  
10 at least one deployable member coupled to the distal end of the plunger, wherein the deployable member is expandable from a delivery configuration adapted for transurethral insertion, to a deployed configuration adapted for engagement of a proximal  
15 portion of the patient's bladder.
2. The apparatus of claim 1 wherein the catheter further comprises a second inlet port, a second outlet port and a second lumen extending therebetween.
3. The apparatus of claim 2 wherein the catheter further comprises a third inlet port, a third outlet port and a third lumen extending therebetween.
4. The apparatus of claim 1 wherein the deployable member comprises at least one wire loop.
5. The apparatus of claim 4 wherein the wire loop has a roughened exterior surface, the roughened exterior surface adapted to entrap gas bubbles to facilitate ultrasonic imaging.
6. The apparatus of claim 4 wherein the wire loop comprises a shape memory material.

7. The apparatus of claim 6 wherein the wire loop consists of a Nickel Titanium alloy.

8. The apparatus of claim 1 wherein the deployable member comprises a petal-shape in the deployed configuration.

9. The apparatus of claim 1 wherein the deployable member comprises a plurality of petal-shaped members that at least partially overlap in the deployed configuration.

10. The apparatus of claim 1 wherein the elasticity of the deployable member enables the deployable member to conform to the proximal wall of the bladder without displacing the bladder wall.

11. The apparatus of claim 1 wherein the deployable member is concave with respect to the proximal wall of the bladder in the deployed configuration.

12. The apparatus of claim 1 further comprising brachytherapy apparatus configured for delivery of radioactive seeds to the patient's prostate, wherein delivery of the seeds is facilitated by  
5 ultrasonic imaging of a junction of the patient's prostate and bladder.

13. The apparatus of claim 1 wherein the plunger further comprises a handle affixed to the proximal end of the plunger.

14. The apparatus of claim 1 wherein the plunger comprises a rigid material.

15. The apparatus of claim 1 wherein the plunger comprises a rigid proximal section and an elastic distal section, the elastic distal section suitable for conforming to the curvature of the catheter.

16. The apparatus of claim 1 further comprising a connector having proximal and distal ends, wherein the proximal end of the connector is affixed to the distal end of the plunger, and the distal end of the  
5 connector is affixed to the deployable member.

17. The apparatus of claim 16 wherein the connector is a plastic rod.

18. The apparatus of claim 16 wherein the connector has a coiled configuration.

19. The apparatus of claim 16 wherein the connector has a flexible wire configuration.

20. The apparatus of claim 1 wherein the catheter has a length of between 30 cm and 50 cm.

21. The apparatus of claim 1 further comprising a piece of tubing at least partially covering the deployable member, the tubing suitable for confining gas pockets to enhance ultrasonic imaging around the  
5 deployable member.

22. The apparatus of claim 21 further comprising adhesives suitable for affixing the deployable members to the tubing to confine the gas pockets within the tubing.

23. The apparatus of claim 21 wherein a plurality of spaced apart pieces of tubing are spaced along the deployable member.

24. The apparatus of claim 1 wherein the deployable member further comprises a hinging member suitable for rotating the deployable member to a predetermined configuration upon deployment.

25. The apparatus of claim 1 wherein the deployable members comprise a plurality of interwoven wires.

26. A method of facilitating visualization of a patient's prostate/bladder junction, the method comprising:

5 providing apparatus comprising a catheter having proximal and distal ends, a proximal deployment port at the proximal end, a first outlet port at the distal end, a first lumen extending therebetween, a plunger having proximal and distal ends, and at least one deployable member affixed to the distal end of the  
10 plunger;

advancing the apparatus through the patient's urethra;

distally advancing the deployable member beyond the distal outlet port to deploy the deployable  
15 member to a predetermined configuration within the patient's bladder; and

proximally retracting the deployable member such that it engages a proximal portion of the patient's bladder.

27. The method of claim 26 further comprising injecting an echo-contrast agent to facilitate visualization of the patient's prostate/bladder junction.

28. The method of claim 26 further comprising ultrasonically imaging a junction between the patient's bladder and the patient's prostate.

29. The method of claim 26 further comprising performing brachytherapy on the patient's prostate.